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Subject: Responsible Agency Comments
2013 Administrative Draft
Bay Delta Conservation Plan Environmental Impact Report/Environmental Impact
Statement

Dear Russ:

This letter presents the attached comments by the staff of the Delta Stewardship Council (DSC), working with our Arcadis consultant team, on the 2013 administrative draft of the Bay Delta Conservation Plan (BDCP) EIR/S.

Our review of the draft has been guided by two principles. The first is the Delta Plan's recognition of the BDCP's importance as an element of the plan's comprehensive approach to furthering the achievement of the co-equal goals. The Delta Plan recommends successful completion of the BDCP by the end of 2014. The Delta Plan recognizes the importance of addressing the Delta conveyance problems and recovering Delta fish and wildlife by restoring habitat and reducing other stressors on the ecosystem. A BDCP that successfully fulfills the Delta Reform Act's requirements will address these goals. We want to assist in completing an EIR/S that contributes to a successful BDCP.

The second principle guiding our review is an appreciation of the EIR/S's important role in the administrative record that will support decisions about the BDCP, recognizing that one day the Delta Stewardship Council may be relying on that record should the BDCP's approval be appealed to the DSC. With that in mind, our review examined how thoroughly the EIR/S reflects key CEQA provisions and the unique EIR/S requirements specified in the Delta Reform Act; as well whether the EIR/S provided information that could contribute to determinations about the BDCP's conformance with the Natural Communities Conservation Act (NCCPA). These requirements often overlap, but we've tried not to repeat comments made in one area even though they may apply to other areas. We've tried to organize the comments consistent with these Acts' requirements.

"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."

– CA Water Code §85054

Mr. Russell Stein
Chief, Environmental Management, DHCCP
Department of Water Resources
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I want to start off acknowledging the impressive scope and depth of analysis and evaluation of the BDCP and its alternatives presented in the draft. You and your team have made substantial progress since the 2012 administrative draft. Thanks, too, for taking the time to meet with DSC staff and its consultants to present aspects of the draft documents and answer our questions. Since the 2013 draft documents represent a work-in-process, some of our comments may already be addressed and will soon be included in the forthcoming public draft of the EIR/S. Other comments, however, reiterate suggestions made in our prior letters about the EIR/S's scoping or prior administrative drafts, but which the EIR/S still doesn't fully address (Phil Isenberg to Mark Cowin – April 21, 2010; Joseph Grindstaff to Mark Cowin – June 28, 2010; Joseph Grindstaff to Mark Cowin November 15, 2010; Joseph Grindstaff to Russell Stein – April 18, 2012). The Delta Independent Science Board's comment letters of June 23, 2013, May 13, 2013, and June 12, 2012 also include thoughtful suggestions that ought to be addressed by appropriate revisions in the EIR/S's public draft. Where relevant, this letter considers our prior comment letters and those provided by the Independent Science Board, especially its June 24, 2013 comments to the Council and Department of Fish and Wildlife.

Finally, some of our comments may reflect our own evolving understanding of the information and analysis in the EIR/S. We have not reviewed all the documents completely. Once we have additional time to review the BDCP and the public draft EIR/EIS/ we may supplement these comments or provide additional details. Where you believe we misunderstand what the EIR/S is trying to convey or how it addresses an issue we think needs attention, we hope you'll be able to meet with us again to help us better understand how the EIR/S addresses our concerns. We look forward to continued consultation with the Department and its BDCP partners about the BDCP and its EIR/S, as the Delta Reform Act provides (Water Code 85320(c)).

Note that our comments on the administrative draft EIR/S are presented as a responsible agency, and they will not have a pre-decisional effect on possible future appeals of DFW's determination related to the BDCP (Water Code Section 85320(e)). The comments have not been approved by our Council, and so reflect only views of our staff and consultants. We look forward to further discussions with you on the draft EIR/S and other elements of the proposed BDCP conservation plan in the future. Please contact Carl Lischeske, P.E., at (916) 445-5891, if you would like to discuss our comments.

Sincerely,



Dan Ray
Chief Deputy Executive Officer

Attachment

REVIEW COMMENTS
2013 ADMINISTRATIVE DRAFT
BAY DELTA CONSERVATION PLAN
ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT
Prepared by the
DELTA STEWARDSHIP COUNCIL

INTRODUCTION

This document presents comments prepared by Delta Stewardship Council's (DSC) staff and consulting team on the 2013 administrative draft of the Environmental Impact Report/Environmental Impact Statement (EIR/S) for the Bay Delta Conservation Plan (BDCP).

As a general matter, we found the scope and depth of the DSC's compilation and analyses of environmental information about the BDCP overwhelmed us. We share the Independent Science Board's June 24 plea for summaries at the opening of each chapter and readable comparisons of the alternatives' environmental impacts, including tables that compare alternatives' effects in terms of readily understood measures such as water exports, reverse-flow days, losses or gains attributable to changes in water deliveries, or farmland removed from production. We had previously raised this issue in our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S.

DELTA REFORM ACT REQUIREMENTS

The Delta Reform Act, in Water Code Sec 85320 (c)-(e), gives the DSC four responsibilities with respect to BDCP's preparation:

1. It is a responsible agency in development of the EIR/S.
2. It is to be consulted by DWR during the BDCP's development.
3. If the BDCP is approved by the Department of Fish and Wildlife's (DFW) as meeting the requirements of law, the DFW's determination may be appealed to the Council.
4. If the BDCP meets the Delta Reform Act's requirements, the DSC shall incorporate the approved BDCP in the Delta Plan.

The BDCP will not be incorporated into the Delta Plan and its public benefits will not be eligible for state funding if it does not meet the Delta Reform Act's requirements (Water Code Section 85320(b)).

We looked for but could not find a description of these roles, especially the DSC's potential appellate role and its responsibility to incorporate the BDCP, once approved,

into the Delta Plan, in the EIR/S's project description, which ought to include a description of how the DSC, as a responsible agency, intends to use the EIR/S.

In addition, if the EIR/S will provide programmatic or project level environmental documentation for projects that may be covered actions covered by provisions of the Delta Plan (Water Code 85057.5, the Council's appellate review should also be acknowledged (Water Code 85225.1).

The Delta Reform Act also lays out specific requirements regarding the BDCP's EIR/S (Water Code Section 85320(b) (2) (A-G). We emphasized the importance of these requirements in our June 28, 2010 scoping comments on the BDCP's EIR. The draft EIR/S's Appendix 3I begins to address compliance with these Delta Reform Act requirements, but only in a brief and simplistic manner. It relies on the reader's efforts to search for and review significant portions of both the EIR/S as well as the Effects Analysis (EA). We ask that the public draft EIR/S include a more specific and robust discussion, accompanied by meaningful tables or figures, explaining where in the EIR/S one may find the information and analysis required by Water Code Section 85320(b) (2) (A-G) and, when it is relevant, how that information can be used when considering the BDCP's compliance with the NCCPA (Chapter 10 of Division 3 of Fish and Game Code).

Conveyance alternatives and diversion rates: The EIR/S assesses a diverse array of rates of diversion and conveyance alternatives. Care should be taken to assure that the review and analysis of each alternative is "comprehensive" as required by Water Code Section 85320(b) (2). Your agencies should consider how this standard interacts with NEPA's requirement that all alternatives must be analyzed and presented to similar levels of detail.

Flow Criteria: We previously raised the issue of flow criteria in our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S. The Delta Reform Act requires that the EIR/S include a comprehensive analysis of a "reasonable range of flow criteria, rates of diversion, and other operational criteria required to satisfy the criteria for approval as [an NCCP] and other operational requirements and flows necessary for recovering the Delta and restoring fisheries under a reasonable range of hydrologic conditions, which will identify the remaining water available for export and other beneficial uses." The Water Code also directs the State Water Resources Control Board (SWRCB) to develop new flow criteria for the Delta's ecosystem necessary to protect public trust resources and to better inform planning decisions in the BDCP.

In 2010, the SWRCB prepared its report "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem" presenting its technical assessment of flow and operational requirements to provide fishery protection under existing conditions.

We previously emphasized the importance of taking into account the flow criteria in our June 28, 2010 scoping comments on the BDCP's EIR. We understand that the flow criteria presented in the SWRCB 2010 report have no regulatory affect, and are aimed primarily at public trust issues for fish and wildlife, rather than also balancing those issues with other beneficial uses that may be in the public interest. Nevertheless, it would be helpful if the EIR/S, perhaps in Section 2 or in Section 3.2, explains how the 2010 flow criteria have been used, as the Delta Reform Act intended, in "informing planning decisions for the ... Bay Delta Conservation Plan" (Water Code 585086(c)(1)). After reviewing the chapters identified in Appendix 3I, it is not apparent how the EIR/S used the SWRCB 2010 flow criteria in its review and analysis. Consideration of the SWRCB's flow criteria has been a point of contention in preparation of the Delta Plan, and should be addressed directly in the BDCP's EIR/S.

A unique requirement of the Delta Reform Act is the requirement for the BDCP's EIR to comprehensively review and analyze the "operational requirements and flows necessary for recovering the Delta ecosystem and restoring fisheries under a reasonable range of hydrologic conditions [that] will identify the remaining water available for export and other beneficial uses" (Water Code 85320(b)(2)(A)). We could not find such an analysis in the EIR/S or its supporting material. This is an atypical requirement of an EIR/S, and probably warrants conversation with us and the relevant trustee agencies about how best to address it. One approach, if the BDCP agencies accept the premise that the SWRCB's flow criteria identify the flows necessary for recovering the Delta ecosystem and restoring fisheries under a reasonable range of hydrologic conditions, could be consideration of an alternative that applies those criteria to assess the remaining water available for other beneficial uses and exports and provides conveyance facilities for the latter. Alternatively, the EIR/S could provide its own assessment of the flows necessary for recovering the Delta and restoring fisheries under a reasonable range of hydrologic conditions, and consider an alternative capable of conveying the flows available for export while leaving sufficient water other beneficial uses. In this way, EIR/S would demonstrate its review and analysis of a full range of flow criteria, from full contract deliveries to full protection of the Delta ecosystem, its fisheries, and in-Delta beneficial uses, which would, bound a "reasonable range." It could be that evaluation of alternatives that the BDCP agencies conclude are not reasonable extends only as far Chapter 3's screening of alternatives for further study, or these alternatives may warrant more comprehensive analysis and consideration of its impacts in Chapters 5 (water supply), 6 (surface water), 8 (water quality), and 11 (fish and aquatic resources). Clear explanations should be provided when alternative flow criteria are rejected as unreasonable and therefore screened from full consideration. Our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S also emphasized the importance of demonstrating how the screening criteria affected the range of alternatives considered.

Operational Criteria: We previously raised the issue of operational criteria in our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S. To carry out the Delta Reform Act's requirement to consider a reasonable range of 'other operational criteria'(Water Code 85320(b)(2)(A), it would be helpful if the EIR/S clearly described: 1) how and why operational scenarios were developed; 2) the basis for the range of flows included in the proposed Decision Tree; 3) the criteria used to apply scenarios to the various project alternatives; 4) how the various operational scenarios contribute to meeting the coequal goals; 5) what the operational scenarios mean in the comparison of alternatives, and 6) what is proposed for near-term interim operations. The EIR/S should show how operational scenarios employ an adaptive range within an adaptive management framework that is linked the BDCP goals and objectives.

In addition, we recommend that the EIR/S should discuss how the range of flow criteria, rates of diversion, and other operational criteria could be influenced by development of new surface and groundwater storage projects that are currently under consideration.

Climate Change: The Delta Reform Act requires that BDCP's EIR/S comprehensively review and analyze the potential effects of climate change (including possible sea level rise up to 55 inches and possible changes in total precipitation and runoff patterns) on the conveyance alternatives and habitat restoration activities considered in the EIR/S. Chapter 29 represents BDCP's general compliance with this requirement. The EIR/S's section 29.6 could be improved to provide a better understanding of how BDCP will increase resiliency and adaptability to climate change in support of its stated conclusions. For example, the EIR/S states that "by adding a wider variety of water management options and restoring habitat on a large scale, the BDCP can help buffer negative effects of temperature, thereby adding resiliency to increased water temperatures" (page 29-20). What exactly will buffer the negative effects of temperature?

The terms resiliency, resilience, adaptability, adaptation and adaptive capacity are used frequently and, in some instances, interchangeably. The EIR/S, in particular Chapter 29 and the Glossary (Chapter 35), would benefit from clear definition and use of these terms. This also applies to the explanation of why a particular conservation measure (CM) or alternative improves the resiliency or adaptability of the system. Section 29.6.2.1 should be rephrased to avoid current circular reasoning that Alternatives 1-5 will improve water supply reliability by "providing a more reliable water supply."

Chapter 29 discusses sea level rise and climate change impacts on through-Delta conveyance. It does not, however, assess whether these impacts may affect the long term capacity of the preferred alternative to convey waters for export from the Delta if rising seas and related changes in Delta water quality limit diversions from existing south of Delta diversion facilities, essentially limiting most exports to what could be

conveyed through an isolated conveyance system. This possibility merits discussion. Section 29.6 of the EIR/S would also benefit from improved discussion on how new conveyance will provide more flexibility to deal with the effects of climate change and sea level rise in operations of the State Water Project and Central Valley Project.

In addition, the EIR/S says that providing “alternative” habitat will make the ecosystem more resilient and adaptable (p 29-18). However, “alternative” habitat may be conducive to introduced predators such as bass and striped bass or to non-native invasive species, which could adversely affect the resilience of the species of concern. The EIR/S would be improved by clarifying this issue or citing prior studies to support this claim. The EIR/S also states that some restoration-related CMs will add to resiliency of the system through opportunities for migration of species upland (as sea level rises). Because these potential benefits may be offset if rising sea levels flood restored marshes, the EIR/S should analyze the impacts of altered water levels on the quality and value of restored habitat.

Although the permit is for 50 years, the proposed conveyance facilities will most likely have a much longer life. Chapter 29 does not explain how CM 1 may be affected by the effects of sea level rise and changes in precipitation and runoff patterns in and beyond the late long term, nor does it describe how CM 1 may be adapted to these changes.

Water Supply Reliability and Resilience: The Delta Reform Act requires the BDCP’s EIR/S to comprehensively review and analyze “the resilience and recovery of Delta conveyance alternatives in the event of catastrophic loss caused by earthquake or flood or other natural disaster.” The National Infrastructure Advisory Council defines infrastructure resilience as: “the ability to reduce the magnitude and/or duration of disruptive events. The effectiveness of a resilient infrastructure or enterprise depends upon its ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event.” Please consider the application of this definition to these sections.

Delta Levees: The EIR/S does not assess the resilience and recovery of conveyance facilities or conveyance operations impacted by levee failure. We previously noted the importance of addressing the improvement of Delta levees in our April 2012 letter commenting on that edition of the BDCP’s administrative draft EIR/S. Chapter 6 states that Delta levees are currently at risk of failure from factors such as overtopping, under- and through-seepage, subsidence, animal burrows, and earthquake loading. The risks of levee failure will increase in the future as sea level rises and subsidence continues. Levee failures would severely impact water supply reliability, and would be catastrophic to Delta communities. The resulting flooding would inundate homes, farms, and infrastructure in the Delta (including proposed conveyance facilities), causing significant environmental, social, cultural, and economic impacts.

Except for making improvements to levees that are disturbed by construction activities, there is no provision to strengthen levees in the Delta for either static conditions or earthquake loading. Because the proposed conveyance facilities represent critical infrastructure for the state, the risks posed by levee failure and the ability of the facilities to recover from levee failure should be clearly described in Chapters 5 (water supply) , 6 (surface water), and 8 (water quality).

In addition, levees surrounding islands in the western Delta help prevent saline water from moving into the central Delta. If the levees in the western Delta fail, water quality in the central Delta will be adversely impacted. What impacts do levee failures pose to: 1) through-Delta conveyance, including the quality of Delta water available for export; and 2) to habitat restoration? In the event of a major earthquake in the Delta, how will levees perform? If levees along the freshwater corridor or the western islands fail, how difficult will it be to restore them to condition that would allow resumption of exports from south Delta pumping facilities, and how long will conveyance operations and/or water quality be affected before full recovery?

Sea level rise will raise water levels in the Delta, yet neither chapter 3 nor chapter 29 of the EIR/S acknowledges the need to increase the height of levees and adapt facilities to accommodate this change. As we suggest in our remarks under "CEQA analysis" below, it seems proper to consider an alternative that improves water supply reliability and improves resilience in the event of an earthquake or flood by strengthening levees along the current corridor conveying freshwater to the export pumps, in combination with the pipelines of the preferred alternative. Other ongoing efforts to strengthen, improve, and maintain other Delta levees, such as those recommended in the Delta Plan, could be included in the Cumulative Effects Analysis (Section 4.2.4.2).

A potential measure to mitigate these risks is recommended in the Delta Plan. The plan recommends (WR R4) that water suppliers that receive water from the Delta watershed should include an expanded water supply reliability element, starting in 2015, as part of the update of an urban water management plan, agricultural water management plan, or integrated water management plan. The expanded water supply reliability element would detail how water suppliers are reducing reliance on the Delta and improving regional self-reliance through investments in local and regional programs and projects, and should document the expected outcome for a measurable reduction in reliance on the Delta and improvement in regional self-reliance. At a minimum, these plans should include a plan for possible interruption of Delta water supplies for up to 36 months due to catastrophic events impacting the Delta, evaluation of the regional water balance, a climate change vulnerability assessment, and an evaluation of the extent to which the supplier's rate structure promotes and sustains efficient water use. The EIR/S should consider how this mitigation could be implemented through provisions of contracts with water suppliers serviced through the BDCP's conveyance facilities.

Flood Management. The EIR/S could also benefit from more clearly carrying out the Delta Reform Act's requirements to consider potential effects on Sacramento River and San Joaquin River flood management. We noted the importance of addressing this issue in our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S. Because the proposed conveyance facilities represent critical infrastructure for the state, the risks posed by flooding and the ability of the facilities to recover following a major flood should be clearly described. Chapter 3 states that new and reconstructed levees will be designed "to provide the same level of flood protection as the existing levee." Intake structures are proposed with "top deck elevation aligning with the top of the adjacent levee to maintain flood protection" and the "top of walls would be at the flood protection elevation" for sedimentation basins and solids handling facilities. Chapter 3 also states: "All construction and modifications will comply with applicable state and federal flood management, engineering, and permitting requirements." More useful would be a fuller explication, developed in consultation with the Central Valley Flood Protection Board, DWR's Flood Maintenance Division, and local reclamation districts, of how Sacramento River and San Joaquin River flood management may be affected by locating BDCP diversion facilities and ecosystem restoration projects within the State Plan of Flood Control's facilities. This ought to also include both assessment of flood management effects from enhancing channel margins and restoring levees along the Sacramento and San Joaquin rivers and their distributaries, as proposed in Section 3.6.2.6. Effects of other habitat restoration conservation measures on these facilities ought to be evaluated. Effects of the project on flood conveyance capacities and flood project maintenance duties could be described, as should implications for other future management of the flood management facilities on these rivers.

While conveyance facilities will be protected from the design flood, the resilience of facilities to larger flood events ought to also be discussed. Much recent attention has been focused on "atmospheric rivers", and the resulting large floods (floods larger than the 0.5 percent flood) that are possible in the Delta, and may be more likely with climate change. Questions the EIR/S should consider include: 1) At what level of flooding in the Delta will proposed facilities become inoperable (including the existing Banks and Jones pumping plants)? 2) In the event of a major flood in the Delta, how difficult will it be to restore the facilities and how long will conveyance facilities be out of operation? 3) What does climate change and sea level rise mean to the flood risk faced by conveyance facilities in the Delta? 4) If new facilities are designed to provide the same level of flood protection as the existing levee, how will the new facilities be adapted to account for the increased Delta water levels that may accompany sea level rise?

Evaluation of implications of the BDCP for the California Central Valley Flood Protection Plan ought also to be reviewed and analyzed. The flood plan provides for two levels of

flood risk, protection from the 0.5-percent flood (200-year flood) for urban areas, and protection from the 1-percent flood (100-year flood) for rural areas. To what level will proposed conveyance facilities be protected (i.e., what is the design flood)? If proposed facilities will be designed to meet current levels of flood protection in the Delta, what is the flood risk posed to this critical new infrastructure (i.e., what magnitude of flooding will inundate some or all of the new conveyance facilities)? Will improvement to other flood management facilities be required for the BDCP's conveyance facilities to be eligible for assistance through FEMA's Hazard Mitigation Program, the Army Corps of Engineers' PL 84-99 program, or emergency response and recovery programs? These are among the questions that ought to be considered in the EIR/S's analysis of this issue.

Finally, if new facilities are designed "to provide the same level of flood protection as the existing levee," how will new facilities be adapted to account for the increased water levels in the Delta that may accompany sea level rise? These issues should be discussed in the description of alternatives (section 3.5), in section 6.3.1.1 in the context of surface water impacts and flood management, and in section 29.6.1 with respect to climate change, sea level rise, and hydrology changes.

Mitigation Responsibilities: The Delta Reform Act requires that "construction of a new Delta conveyance facility shall not be initiated until the persons or entities that contract to receive water from the State Water Project and the federal Central Valley Project or a joint powers authority representing those entities have made arrangements or entered into contracts to pay for the costs of ... mitigation, including mitigation required pursuant to Division 13 (commencing with Section 21000 of the Public Resources Code), required for the construction, operation, and maintenance of any new Delta water conveyance facility" (Water Code Section 85089 (A)). Accordingly, BDCP mitigation measures proposed in the EIR/S ought to be clearly specified and their linkages to impacts of construction, operation, and maintenance of the conveyance facilities of the preferred alternative should be plainly identified, so that the financial implications to the water contractors or others are apparent and can be considered in the BDCP's finance plan. Open ended pledges or vaguely described commitments to avoid or reduce conveyance facilities' adverse effects may sow the seeds of future conflicts.

NCCPA REQUIREMENTS

Water Code Section 85320(b) (1) (A) requires that the flow criteria, rates of diversion, and other operational criteria considered in the BDCP's EIR/S 'satisfy the criteria for approval of natural communities conservation plan". The EIR/S's Section 3.2.1.3 could be strengthened by a more explicit, readily understood assessment of this topic. Documentation of how the flow criteria, rates of diversion, and other operational criteria

considered in the BDCP's EIR satisfy this requirement would be an important contribution of the EIR/S to the administrative record supporting decisions about the BDCP. We had previously raised this issue in our April 2012 comments on that edition of the BDCP's administrative draft EIR/S.

Among the factors that complicate this analysis is that the success of CM 1 will depend on and be influenced by implementation of the other CMs of the BDCP. The anticipated impacts of CM 1 and BDCP's ability to meet the requirements of CEQA, the Endangered Species Act (ESA), and NCCPA are inextricably linked to the anticipated effects of the other CMs, particularly near-term impacts of CMs 3-8 and 10. Chapters 11 and 12 of the EIR/S would be significantly improved by providing specific descriptions of the impacts of flow and restoration actions on protection and recovery of covered species. This probably deserves more discussion among our agencies.

Baseline Description: To determine if BDCP will meet its biological goals and objectives, an improved description of baseline conditions, which should be quantitative when possible, is needed in sections 3D.2.1 and 3D.2.3. It is not clear whether baseline conditions include restoration actions that are already being implemented pursuant to the current BIOPS, the CVPIA, or other programs, in contrast to benefits derived solely from the proposed BDCP's conservation measures. An explanation of how the EIR/S builds off the differing considerations of a baseline provided by CEQA, NEPA, ESA, and the NCCPA could help clarify how the EIR/S baseline was compiled. Metrics for baseline estimates of species abundance and distribution, and quantitative estimates for habitat types that will be affected by BDCP would aid evaluation of proposed BDCP actions.

CEQA REQUIREMENTS

Scope of Analysis: Our April 2012 letter asked how the BDCP will respond to the state's policy about reducing reliance of the Delta. Some, including our own Independent Science Board, suggest the EIR's scope ought to be expanded to consider measures to reduce reliance on the Delta exports through improved water use efficiency, conjunctive use, or local water supply projects, measures to improve surface or groundwater storage. Others advocate that it include wide-ranging programs to improve Delta levees.

We suggest these matters be addressed through the EIR/S's assessment of cumulative impacts or/and in its examination of candidate mitigation measures. For example, the Delta Plan recommends completion of surface water storage investigations for proposed surface storage projects, including evaluation of potential additional benefits of integrating operations of new storage with proposed Delta conveyance. In addition, the DSC has urged DWR to identify projects throughout California that could be

implemented within the next five to ten years to expand existing surface and groundwater storage facilities, create new storage, improve operation of existing Delta conveyance facilities, and enhance opportunities for conjunctive use programs and water transfers in support of the coequal goals. There are at least five storage projects currently under consideration including raising Shasta and Los Vaqueros dams, Sites and Temperance Flats reservoirs, and Delta Wetlands. The Delta Plan also recommends interim priorities for state investment in the Delta's levees. The California Water Plan assesses how statewide water conservation and efficiency and diversification of local water supplies through desalination, water reclamation, storm water capture, and other alternative supplies may contribute to water supplies. These plans, other reasonably foreseeable projects, and their implications for the BDCP can be more explicitly considered in the EIR/S' cumulative impact analysis. We previously emphasized the importance of discussing how storage project's could impact flows into the Delta as well as operations of the BDCP and the reliability of Delta water supplies in our April 2012 letter commenting on that edition of the BDCP's administrative draft EIR/S.

In some cases, actions to improve storage or to reduce reliance on the Delta may also warrant consideration as measures to mitigate BDCP alternatives' impacts on water supplies, water quality, or other values, even if they are outside the alternative projects considered in the EIR/S. Such consideration could build off the Delta Plan EIR/S's evaluation of these actions, allowing the BDCP to draw more fully on the full portfolio of measures available to address the state's co-equal goals for the Delta.

On the other hand, improving levees along corridor conveying freshwater through the Delta from the Delta cross channel to the existing export pumps would seem to be consistent with the BDCP's objectives of improving the conveyance system so that it is more resilient in the event of earthquakes and floods, anticipates the effects of sea level rise, and minimizes the potential for public health and safety impacts resulting from a major earthquake that causes breaching of Delta levees. A project that improves levees along the freshwater conveyance corridor, as recommended in the Delta Plan, combined with the preferred project's tunnels may better achieve the BDCP's objectives than one that relies on the tunnels alone. We would like to discuss with you opportunities to evaluate such a combined approach to attaining the EIR's objectives.

Restoration Alternatives: CEQA requires addressing alternatives identified for consideration in meaningful detail before screening, and providing explanations for their selection or elimination. As noted in Chapter 3 (page 3-3), "CEQA and NEPA require that an EIR and EIS include a detailed analysis of a reasonable range of alternatives to a proposed project." While the EIR/S presents a range of alternatives for CM 1, there is no equivalent range provided for other conservation measures (page 3-2). The EIR/S

presents only one measure each for CMs 2-22, except for minor modifications in Alternatives 5 and 7.

An alternative conservation measure that could warrant consideration is action to provide a more natural Delta flow regime, particularly as a feature Alternative 8. A more natural flow regime might also lessen the BDCP's impacts on in-Delta water quality reported in the EIR/S. Considerable scientific research and evaluation confirms the value more natural flows could provide to the Delta ecosystem. Some suggest enhanced flow may also provide more reliable benefits to the ecosystem than marsh restoration, the benefits of which are less certain and not yet well documented. A more natural flow regime need not be attained solely by reducing Delta exports if opportunities can be found to enhance Delta inflows through either water transfers or through releases from new surface storage projects now under study. Due consideration, of course, would need to be paid to protection of existing water rights and the need to avoid impacts to upstream water users, consistent with the Natural Resources Agency's policy expressed in February 6, 2013 letter from Secretary Laird and the SWRCB's chairman to the North State Water Alliance.

Another approach to evaluating alternative conservation measures may be to emphasize restoration of tidal marsh at Suisun Marsh, while deemphasizing restoration that converts farmlands at other locations. Could such an alternative reduce unmitigable impacts to farmland, make fuller use of existing public lands for restoration before private property is acquired, or allow mitigation of lost waterfowl hunting recreation through enhancement of waterfowl production at Sherman or Twitchell Islands? Would the hydrodynamics of restored tidal marsh in Suisun Marsh dampen saltwater intrusion into the Delta, thereby mitigating adverse water quality impacts of other BDCP features? If available data is suitable for such analysis, it could help refine the selection of a preferred BDCP alternative.

Meaningful Evaluation of Alternatives: Chapter 12 in the EIR/S should clearly show that unintended and potentially adverse consequences of proposed CMs have been considered and evaluated. For example, the EIR/S describes positive effects of habitat restoration in the impact analysis without also considering that the proposed actions could result in adverse impacts from: 1) increases in invasive non-native species; 2) changes associated with suspended sediment dynamics; 3) effects on existing downstream tidal wetlands; and 4) extended herbicide applications

The EIR/S would be improved by providing a convenient means to compare alternatives against each other for their abilities to, among other things: 1) achieve ecosystem restoration objectives; or 2) achieve water supply reliability objectives. We concur in the Independent Science Board's suggestion that the EIR/S include a summary evaluation of alternatives and a table to facilitate comparison of each alternative relative to the

goals and objectives of the proposed BDCP project actions as they relate to CEQA, ESA, and NCCPA.

Detail of Alternatives: Currently, the BDCP's Effects Analysis (EA) is limited to the preferred project alternative. The EIR/S states "CEQA does not require the alternatives to be evaluated at the same level of detail as the proposed project" (page 3-4, lines 18-29). On the other hand, CEQA does require: "sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project" (Section 15126.6(d)). The EIR/S only compares the preferred alternative to existing conditions and the no action alternative; it does not enable meaningful comparison between all alternatives. Because the EA is limited to the preferred project, the EIR/S should include a meaningful way to compare other alternatives, even if only on a qualitative basis.

Since the EA is intended to simulate future conditions and account for impacts of the project, it is appropriate to consider CM 1 at a project-level of detail. The EA conclusions must well supported, however, recognizing that the overall effects of the proposed project will also be influenced by: 1) alternative operations scenarios in the decision tree; and 2) the impacts of CMs 3-9 and 10, which have thus far been identified at a programmatic level. In addition, we concur in the Independent Science Board's concerns that the independent science review of EA ought to occur prior to the release of the public review draft of the EIR/S, or that the EIR/S review period ought to be sufficiently long to allow agencies to consider the independent science review as they comment on the EIR/S.

The EIR/S would be improved by considering habitat restoration experience gained from previous projects (both successful and unsuccessful) as a basis for how proposed BDCP conservation measures may be expected to perform.

Analysis of Near-Term CMs: While it is reasonable to defer project-specific analysis for early-long-term and late-long-term projects (Table 3-4) to a later date as proposed in the EIR/S, a large amount of restoration work for CMs 3-2-10 and 10 is scheduled for implementation in the same time period as construction of the proposed conveyance. It seems reasonable for the EIR/S to explain section 3.3.2 of the EIR/S how and when near-term CMs 2-10 will be similarly addressed and evaluated with a project-specific EIR/S. This concern was also raised by the Delta Independent Science Board (ISB) in its recent comment letter, as well as the Council's April 2012 letter on that edition of the BDCP administrative draft EIR/S. The ISB indicated that the difference in the level of analysis appears to give unequal weight to the coequal goals. An approach worthy of consideration might also be a staged EIR/S as described in EIR Guidelines Section 15167, in which the BDCP EIR/S provides programmatic evaluation of these CMs but acknowledges the need for subsequent environmental documents of specific projects.

Delta Plan Conflicts: CEQA requires analysis of policy and planning context in which a project is proposed, including inconsistencies between the proposed project and applicable regional plans, such as the Delta Plan (Sec'y for Resources Guidelines 15125(d)). The EIR/S should include such an assessment of any inconsistencies between the Delta Plan's policies and recommendations and the BDCP. Because the Delta Reform Act requires that, if successfully approved, the BDCP shall be incorporated into the Delta Plan, the Delta Plan may need revision when the BDCP is incorporated into it to eliminate any inconsistencies. Identification of those conflicts would be an important first step in assessing potential environmental impacts of such changes, which the BDCP's EIR/S ought to identify and evaluate so that the DSC can rely on it when the BDCP is incorporated in the Delta Plan (see notes above under DELTA REFORM ACT REQUIREMENTS about intended use of the EIR/S by the DSC).

Significant Impacts and Mitigation Measures: CEQA Sections 12126.2 and 15126.4 require discussion of the significant environmental impacts of the proposed project, and of the mitigation measures proposed to minimize those impacts. In some cases, however, identification of feasible and enforceable mitigation measures is postponed until further evaluation and consultation with Delta water purveyors (see for example, mitigation measures WQ-7a, 7b, and 7c). This may not meet CEQA section 15126.4(a)(1) (B), which requires that "formulation of mitigation must not be deferred to a future time." As an alternative, the EIR/S could offer measures that "specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." As we noted earlier, clearer description of proposed mitigation measures will also aid in assignment of mitigation costs in conformance with Water Code 85089(a).

The EIR/S would also benefit from a clear explanation of what is considered to be a "feasible" mitigation measure considering the significant scope, expense, social impact, and technical difficulty of the proposed BDCP's 50-year plan. What might seem "capable of being accomplished in a reasonable period of time taking into account economic, environmental, legal, social or technological factors" – CEQA's definition of feasible -- may be quite different for a multibillion dollar, 50-year project with the BDCPs social impact and legal and technical difficulty than for typical projects assessed under CEQA. The extent and scale of BDCP's proposed actions necessitates applying a comparable scale and level of effort for the proposed mitigation necessary to offset identified impacts.

Particular attention should be paid to impacts that affect achievement of the state's co-equal goals for the Delta of a more reliable water supply and protection, enhancement, and restoration of the Delta ecosystem (Public Resources Code 29702(a)). Also important are impacts that affect the unique values of the Delta as an evolving place, which are to be protected as the co-equal goals are achieved. The Delta Plan's

Chapter 5 identifies these unique values as including the Delta's geography of low-lying islands and tracts, shaped by waterways, tides, levees and water controls; its rural heritage characterized by farms and small towns; its agricultural economy; and its opportunities for outdoor recreation. We highlight several sections of the impact assessment below where the EIR/S can be improved to better assess effects on these goals and values and measures to avoid or reduce them.

Water Resources: The Delta Reform Act requires special attention to water quality impacts, requiring in Water Code Section 85320(b) (2) (G) that the EIR include a comprehensive review and analysis of "the potential effects of each Delta conveyance alternative on Delta water quality". Under the preferred alternative, the proposed north Delta diversions from the Sacramento River would result in San Joaquin River flows comprising a larger proportion of the water in the estuary. Because San Joaquin River flows contribute poorer quality water (higher levels of salinity, pesticides, selenium, and other contaminants), modeling results indicate that implementation of the preferred alternative would result in significant water quality impacts in the Delta (e.g., exceeding existing Bay-Delta Water Quality Control Plan [WQCP] objectives). The modeling shows water quality changes for locations in the west and central Delta where flows would become more saline because of: 1) reductions in Sacramento River flow; 2) a higher percentage of San Joaquin River flow; and 3) the impacts of sea level rise. The EIR/S indicates that salinity standards would be exceeded at existing monitoring sites on a more frequent basis after the north Delta diversions begin operation.

Many of the water quality impacts described in the EIR/S are considered significant and unavoidable. For example, all four operational scenarios in the decision tree (Alternative 4, Scenarios H1-H4) would result in substantially increased chloride concentrations in the Delta such that the frequency of exceeding the 150 mg/l Delta WQCP objective would approximately double. In addition, the frequency of exceeding WQCP chloride objectives would increase in the San Joaquin River at Antioch and at Mallard Slough. Substantial long-term degradation would occur at Antioch and at the Contra Costa Canal Pumping Plant resulting in significant adverse effects on municipal and industrial water supply beneficial uses (page 8-414). Water quality for other in-Delta water users may also degrade as a result of BDCP.

The adverse water quality conditions that would occur due to the proposed north Delta diversions result in exceeding existing water quality objectives for multiple constituents including bromide and chloride, and for electrical conductivity. Because these impacts may affect the reliability of water supplies on which in Delta-users depend, Chapter 5 of the EIR/S should identify how the water quality changes affect the quantity of water available to supply in-Delta municipal and agricultural users (e.g., Contra Costa County, Solano County, City of Antioch, Delta water agencies, etc.), including estimates of the

quantity of water that may be degraded in quality. It should also estimate the extent of expected changes in low salinity habitat, quantifying these changes if feasible. In addition, the EIR/S should identify specific and effective mitigation methods available to avoid or reduce these impacts.

The EIR/S water quality impact analysis relies on modeling that assumes the project will not create new sources of constituents that will influence water quality, and bases water quality projections on altered mixing of Delta source waters. Section 8.3.1 of the EIR/S should recognize, however, that additional characterization of water quality impacts beyond the limited qualitative assessment performed to date may be warranted for proposed BDCP restoration actions. The proposed restoration actions would likely result in release of various constituents during construction and throughout their establishment period that will affect water quality. These constituents and their effects should be identified, particularly those in proposed restoration areas that would be subject to frequent tidal inundation or floodwater flows. Information gained from previous studies in areas near and down-gradient from large scale restoration actions (e.g., previous water quality monitoring efforts) should be used in the EIR/S analysis to identify the various types of water quality constituents that could be released due to proposed restoration measures as well as their associated impacts.

Section 8.3.3 of the EIR/S should provide more detailed evaluation of potential impacts from conversion of uplands, agricultural lands, or pasture lands to marshland. These conversions would cause a significant die-off in mostly non-native vegetation that would, upon breakdown by bacteria, release nutrients and potentially other materials into overlying waters. Changes in water salinity and the hydrologic regime will also affect soils, some of which may have high nutrient levels, legacy pesticides, (and, possibly pathogens) from decades of agricultural use. These constituents would be expected to leach from the soils into overlying waters in response to inundation-induced changes in soil chemistry.

Accelerated breakdown of organic matter both above and below-ground could result in higher oxygen demands in water and soils, leading to possible episodes of oxygen depletion in overlying waters. Die-off of vegetation and bare soil surfaces from construction of tidal channels and from excavations to lower intertidal elevations would also be expected to exacerbate turbidity and suspended sediment concentrations. Additional analysis is needed to better characterize the nature and extent of these water quality impacts and to identify effective mitigation measures.

Many of the currently proposed water quality mitigation measures are non-specific, are not clearly enforceable, and are deferred to the future, which may not meet CEQA requirements. The project impacts and mitigation discussion in Chapter 8 of the EIR/S (pages 8-412 through 8-430) highlights this issue. For example, mitigation measure

WQ-11 states: “proposed mitigation requires a series of phased actions to identify and evaluate existing and possible feasible actions, followed by development and implementation of the actions, if determined to be necessary.” The EIR/S should include additional options for more effective mitigation that would directly offset the projected impacts. For example, mitigations could be offered such as providing alternative water supplies, reducing diversions, releasing more flows from reservoirs, including releases from reservoirs proposed for construction in the future, or restoring, where feasible, western Delta and San Francisco Bay tidal marshes and channels to dampen the movement of high salinity tidal into the Delta.

Biological Resources Evaluation: Fish and wildlife impacts are also of especial importance, partly because of the high standards which the project must meet to be approved as an NCCP and HCP. The Delta Reform Act also requires special attention to these effects, requiring in Water Code Section 85320(b) (2) (D) that the EIR include a comprehensive review and analysis of “the potential effects on migratory fish and aquatic resources”. In Chapters 8 and 11, the EIR/S would be improved by addressing several potentially significant adverse effects of the proposed project, including those associated with reduced downstream sediment transport (suspended sediment loads and associated turbidity) that would occur as a result of the proposed north Delta diversions. The EIR/S should also address potential impacts caused by reduced flushing of Sacramento River water, which would increase both hydraulic residence times and the potential production of microcystis, a harmful algal bloom. Increased residence times could also lead to warmer temperatures and potentially adverse fluctuations in dissolved oxygen levels, promoting habitat conditions less favorable to Delta smelt as well as other covered fish species.

The EIR/S impact analysis does not currently compare the anticipated ecological benefits of the proposed project relative to existing baseline estimates for both abundance and distribution of species and habitat types in the plan area. For example, the extent and distribution of low-salinity habitat under existing conditions should be compared to anticipated changes in low-salinity habitat. These ecological baseline estimates serve as useful points of comparison to evaluate anticipated versus actual outcomes on an ongoing basis as a measure of performance.

The EIR/S impact analysis could be improved by:

1. Providing improved justification for eliminating Fall X2 from the CEQA baseline. As presented, the explanation for removing Fall X2 from the CEQA baseline for existing conditions is confusing and not well supported.
2. Distinguishing restoration actions that are either in progress or have been previously committed to (e.g., RPAs required by previous Bio Ops) in contrast to habitat

restoration activities that are solely associated with proposed BDCP project actions (e.g., BDCP's incremental portion of the Yolo Bypass restoration project described in CM 2).

3. Describing upstream effects of climate change, for example potential reservoir re-operation that may be required to address upstream effects of climate change on salmonids.
4. Explaining the modeling results that show a population decline of longfin smelt, a threatened species, compared with current operating conditions. The EIR/S would benefit from an improved analysis of the potential impacts of north Delta diversions on the population growth projections for Longfin smelt.
5. Providing modeling results showing a comparable analysis for both the early long term (ELT) and late long term (LLT) conditions. The current modeling results discussed in the impact analysis are primarily focused on LLT conditions; a comparable analysis of both impacts and benefits associated with ELT actions should also be included.

Delta as a Place: The following six sections of these comments address the "Delta as a Place". Constructing and operating the proposed BDCP conveyance and restoration measures will significantly and adversely affect important attributes of the Delta's regional character, including values that the Delta Plan describes as contributing to the Delta as a distinctive and special place. The Delta Plan anticipates that changes to these attributes will occur, and may be necessary to achieve the co-equal goals, but seeks to accommodate these changes while preserving the fundamental characteristics and values that contribute to the Delta's special qualities and that distinguish it from other places. The proposed mitigation measures, in some instances, may not reduce impacts to less-than-significant; the EIR/S would be greatly improved by: 1) recognizing that collective impacts from a variety of proposed actions will adversely affect the Delta's agricultural, social, and economic character; and 2) by offering additional mitigation measures to better offset adverse impacts.

1. **Construction Footprint.** Construction activities will result in numerous impacts, which are described in various places throughout the EIR/S. However, as currently presented in the EIR/S, the scale of collective impacts to the Delta over ten or more years of construction is not well conveyed. Given that the collective construction impacts will affect the Delta over the 50-year permit, the EIR/S should aggregate the description of impacts associated with construction activities of all CMs in one location, and summarize them in a table with respect to time. In this aggregation, the EIR/S should discuss the overall construction footprint, including construction activities, project-related traffic and congestion, noise, and other impacts, and

compare each project alternative for all CMs involving construction; this would enable improved evaluation of direct physical impact and indirect effects associated with each alternative.

Similarly, the extent of areas that would potentially be restored to marsh or riparian habitat or where earthwork modifications to support construction and operation of all CMs would occur should be clearly identified in chapter 6. These impacts are currently shown at a programmatic level.

2. **Tunnel Muck.** The preferred alternative will produce about 35 million cubic yards of tunnel muck as a result of tunnel boring operations. The muck will be a plastic mix consisting of soil cuttings and conditioning agents (e.g., water, air, bentonite, foaming agents, polymers/biopolymers, etc.). Before the muck can be reused, it must be managed by drying and by possible physical or chemical treatment. The EIR/S, however, states that tunnel muck will be deposited essentially untreated within designated muck storage areas. There is a host of possible beneficial re-uses for reconditioned tunnel muck throughout the Delta – for example, levee repair and strengthening, fill to reverse island subsidence, fill for constructing restoration measures, and general building and engineered fills of all types. Could reconditioning tunnel muck for beneficial re-use be *before storage* be a reasonable mitigation measure?
3. **Groundwater Impacts.** For canal options, the documents indicate that groundwater levels could be lowered in a four-mile wide corridor along the Sacramento River near the proposed north Delta intakes (Chapter 7). This same lowering of groundwater levels, however, does not appear to happen for tunnel alternatives. What is the explanation for this apparent discrepancy?
4. **Agriculture.** According to the EIR/S, most impacts to agriculture will remain “significant and unavoidable” under CEQA. The commitment to providing appropriate mitigation for these effects should be strengthened. This would begin with more detailed assessment of CM 1’s impacts on particular farms and farming operations, each of which has unique attributes of size, ownership, crop type, tenancy, ancillary uses, history and other features that deserve consideration as mitigation measures are developed. The EIR/S indicates that construction of BDCP CMs will cause many significant and adverse direct and indirect impacts to agriculture. For example, Impact ECON-3 comprises a clear change in the agricultural character that defines the Delta region. Farmland will be permanently converted to non-agricultural uses by: 1) construction and operation of conveyance facilities; 2) disruption of agricultural infrastructure; 3) degraded in-Delta water quality; and 4) implementation of restoration measures. The long-term footprint of

quality; and 4) implementation of restoration measures. The long-term footprint of construction and the disruption to infrastructure are subsequently expected to indirectly impact agriculture by increasing production costs (ECON 6) and by generating a regional decline in agricultural employment and income by \$4.8 million (ECON 1, Table 16-42).

The EIR/S states that BDCP proposed actions will have a major regional economic impact, which should be described in either chapter 14 or 16 in sufficient detail to enable meaningful comparison of alternatives. For example, are their expected increases in production costs? What is the regional significance of the \$4.8 million decline in agricultural related income and the associated loss of jobs? What does the loss of a particular crop mean for the viability of that crop in the region as a whole? What are the specific impacts to high value crops (e.g., vineyards) and to heirloom crops that characterize the Delta (e.g., pears and asparagus)?

Though the EIR/S identifies the total amount and production value of farmland and infrastructure affected by project construction, this assessment does not appear to include changes in crop acreage resulting from degraded water quality or from implementing CMs (page 16-44, ECON-18). This likely underestimates the overall impact to the regional economy because restoration measures will convert significant amounts of farmland to non-agricultural uses and reduce crop yields. In the discussion of impacts, the EIR/S should 1) describe project footprints for CMs to assess and evaluate the economic impact to crop production based on an evaluation of current cropping patterns; and 2) evaluate the expected crop losses (and revenue) caused by operations.

The EIR/S does not discuss the secondary effects that would be caused from location-specific activities. For example, the EIR/S does not identify where project impacts may affect a larger amount of land caused by fragmenting parcels, by making adjacent parcels unproductive, or by losses of particular or unique agricultural infrastructure. In particular, chapter 14 of the EIR/S should describe impacts to Delta agriculture that result from loss of important agricultural infrastructure such as processing facilities, slaughterhouses, or dairies. Impact ECON-9 acknowledges says that disproportionate impacts may occur, but the discussion should include evaluation of these effects and how these may, in turn, affect the region. While some losses are directly quantified, secondary effects should also be identified and evaluated.

As described above, water quality may be degraded for in-Delta users and increased salinity may impair crop yields. The EIR/S's chapter 14 should describe the quality and quantity of agricultural lands impacted by water quality changes, and include

mitigation for degraded water quality. Specifically, how many acres of farmland may be impacted by degraded water quality?

Implementing BDCP will significantly alter the agricultural character and regional economy, and the EIR/S projects a future demographic shift in the Delta region as a result (Chapter 16). Proposed mitigation measure AG-1 is intended to maintain overall regional agricultural character, but not to protect specific lands or mitigate specific impacts. As described above, we encourage you to consider a combination of mitigation measures that are meaningful at both the regional and the farm level. Where easements to preserve farmlands are proposed to compensate for unavoidable conversion of other farm lands, they should emphasize preservation of sites where development threats are higher, such as the Delta's secondary zone, rather than areas where development threats are low and the easements contribute less to reducing cumulative threats to farmland. The EIR/s discussion of Agricultural Land Stewardship Plans should describe how necessary actions and land conservation will be funded.

In addition, we encourage you to consider as potential mitigation measures the Delta Plan's recommendations for supporting the Delta's agricultural economy. The Delta Plan (DP R8) recommends that local governments and economic development organizations, in cooperation with the Delta Protection Commission and the Delta Conservancy, encourage value-added processing of Delta crops in appropriate locations. This recommendation is intended to grow and diversify the Delta's agricultural economy. Similarly, DP R9 recommends support for agritourism, particularly in and around Delta legacy communities. This recommendation is intended to provide additional income to farmers, aid in marketing the Delta brand, and enhance the Delta as tourism destination. The Delta Investment Fund authorized by the Delta Reform Act (Public Resources Code 29778.5) may be useful as an element of such mitigation.

If the EIR will inform terminations of Williamson Act contracts, the EIR/S should show that: 1) the location is not based primarily on the lower cost of acquiring land in an agricultural preserve; and 2) for agricultural land converted, no other land exists within or outside the preserve where it is reasonably feasible to locate the public improvement (Sections 51921(a) and (b)). This Williamson Act requirement is frequently overlooked, and has resulted in unexpected delays in implementing restoration actions elsewhere.

Finally, the EIR/S should consider how housing used by farm laborers may be affected by an influx of construction workers during CM 1's construction. Suitable housing for farm workers is in short supply, and its loss may adversely affect farming.

5. Recreation. The ten or more years of conveyance and habitat construction will result in the long-term reduction of recreational opportunities and experiences in the Delta both on land and in water (Impact ECON 5, REC 2 and 3). Traffic delays, disturbance, noise, and water quality impacts may reduce visits to, or prevent access to specific recreational sites. This, in turn, may cause local recreation-related businesses to suffer or close from reduced spending, which results in a decline in regional recreational-related economic activity. Though the proposed mitigation measures offer noise abatement programs, new access roads, alternative waterways, and other activities to minimize disturbances, the impacts of construction activities on recreation are still significant.

As described earlier, the EIR/S should consider possible increases in microcystis, a harmful algal bloom, which may adversely affect water-related recreation activities.

Recreation needs of project's construction workforce should be considered when forecasting impacts. The EIR/S ought also to consider whether housing for construction workers may include extended use of the Delta's recreational vehicle resorts, which may displace people seeking recreational opportunities in the Delta.

Chapter 15 of the EIR/S should provide explicit mitigation measures for the significant and unavoidable recreation impacts caused by limiting access to recreation sites or boating sites. We encourage you to consider as potential mitigation measures the Delta Plan's recommendations for encouraging recreation and tourism. For example, DP R11 asks water management and ecosystem restoration agencies to provide recreational opportunities, including visitor-serving business opportunities, at new facilities and habitat whenever feasible and to protect existing recreational facilities, using California State Parks' *Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh* and the Delta Protection Commission's *Economic Sustainability Plan* as guides. The EIR/S's mitigation measures should also reflect Department of Water Resources' responsibilities to provide recreation associated with the State Water Project and other projects constructed in cooperation with the United States (Water Code 11910-11). Mitigation recommendations should avoid unspecific and unenforceable measures, such as 'the BDCP project proponents will also work with DPR to determine if some of the constructed elements of CM1 could incorporate elements of the DPR's proposal'.

Cultural Resources: The entire Delta region is rich in cultural resources. The Delta Protection Commission's (DPC) feasibility report for the California Delta National Heritage Area surveys many of these resources, and characterizes their unique values. Both the DPC's study and California State Parks' *Recreation Proposal for the Delta* acknowledge the value created by the Delta's combination of agricultural,

historic, and cultural attributes. While the EIS identifies specific sites of cultural value, it would also be useful to consider whether areas significantly affected by construction of CM 1 or by habitat restoration actions may qualify for consideration as significant cultural landscapes under the Secretary of the Interior's *Guidelines for the Treatment of Cultural Landscapes*.

The EIR/S identifies major impacts to archeologically significant sites from the proposed BDCP, most of which are considered significant and unavoidable. The EIR/S states that many important resources that will likely be negatively affected by construction are expected to be in the project footprint. Since not all important historical, cultural, or archeological resources have been identified to date, only programmatic mitigation is offered. The EIR/S states this is because of project site inaccessibility, and the inventory itself may harm or destroy the resource. However this is also likely because locations and footprints of restoration measures have not yet been identified. The EIR/S should consider the impact of CM 1's footprint on potential cultural resources and ensure that sufficient mitigation is provided.

Community Character: The socioeconomic analysis in the EIR/S describes significant impacts from construction and implementation of BDCP that may alter the character of the Delta. The EIR/S states that there will be significant changes in community character caused by: 1) declining property values; 2) building abandonment near construction activities with associated sales tax loss; and 3) changes in the agricultural landscape, regional economy, labor, and employment (impact AG1, 2, and ECON-1 and 3). The EIR/S states that "adverse social effects could also arise as a result of declining economic stability in communities closest to construction effects and those most heavily influenced by agricultural and recreational activities." Actions should be offered to reduce or mitigate adverse impacts in Chapter 16.

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